St. Louis City
Monsanto Company - Q ay

JOHN ASHCROFT
Governor

G. TRACY MEHAN III
Director

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Division of Energy
Division of Environmental Quality
Division of Geology and Land Survey
Division of Management Services
Division of Parks, Recreation,
and Historic Preservation

DIVISION OF ENVIRONMENTAL QUALITY
ST. LOUIS REGIONAL OFFICE
10805 Sunset Office Drive, Suite 100
St. Louis, MO 63127-1017
314-822-0101
Fax No. 314-822-0943

December 24, 1991

Mr. Robert Cheevers
Monsanto Company
1700 South Second Street
St. Louis, MO 63177-7040

Dear Mr. Cheevers:

Enclosed you will find an inspection report conducted by Mr. Gary Myers of my staff. In addition to a RCRA inspection, a closure inspection of the CAC waste tank storage area and incinerator was conducted. There were no unsatisfactory features noted as a result of the inspection, and no response is required from you at this time.

Should you have any questions regarding this report, please feel free to contact me.

Sincerely,

ST. LOUIS REGIONAL OFFICE

Robert S. P. Eck

Robert S. P. Eck
Regional Director

RSPE/GM/sh
Enclosure

c: Hazardous Waste Management Program
Daniel Tschirgi, Hazardous Waste Permits Unit

St. Louis City
Monsanto Company - Queeny

RESOURCE CONSERVATION AND RECOVERY ACT
AND
MISSOURI HAZARDOUS WASTE MANAGEMENT LAW
COMPLIANCE EVALUATION INSPECTION REPORT

Facility

Monsanto Company - Queeny
1700 South Second Street
St. Louis, MO 63177-7040
(314) 622-1469

EPA ID #: MOD004954111
MO Generator ID: 001002

Participants

Department of Natural Resources	Mr. Gary Myers Environmental Specialist St. Louis Regional Office
Monsanto Company Queeny Environmental Staff	Mr. Robert Cheevers Mr. Christopher Dorow Mr. Rich Koenig

Introduction

An inspection of Monsanto - Queeny, located at the above address, was conducted on December 19, 1991 by Mr. Gary Myers of the Department of Natural Resources. The inspection was conducted under the authority of the Resource Conservation and Recovery Act (RCRA) of 1976 and Sections 260.375(9) and 260.377 of the Missouri Waste Management Law (1977) as amended. The inspection was confined to facets of the operation relevant to hazardous waste management.

A closure inspection of the waste storage tank and incinerator was also conducted.

Facility Description

Monsanto - Queeny manufactures a variety of industrial chemicals. The plant has recently reduced the number of operating departments from eight to four. The Lasso/CAC department has been completely shut down, and is in the process of dismantling to be disposed of. The plant operates seven days per week, 24 hours per day, and employs 230 people.

The hazardous wastes at the facility are generated from equipment maintenance , lab wastes, rejected raw materials, distillation columns, and floor sweepings. A current waste listing of continuously generated streams is attached. The facility does generate a variety of other hazardous wastes when a department clean out occurs. These waste streams are covered in the approved permit.

The hazardous wastes stored on-site at the time of inspection were:

- a 55-gallon satellite drum of waste paint solvents (7/3/91), located outside the paint solvent storage building.

- a 55-gallon satellite drum of waste oil (8/12/91), located outside the garage building.

- a 55-gallon satellite drum of waste oil (5/13/91), located outside the package boiler building.

- a 55-gallon satellite container of aerosol cans (12/3/91), located outside the YY building.

- a 55-gallon satellite container of an acetone/methanol mixture (11/19/91), located in the lab building.

- A 485 gallon tank of waste lab solvents (11/19/91), located in the basement of the lab.

The permitted hazardous waste storage area consists of a sloped concrete pond enclosed on two sides. The floor is sloped in such a manner that any spilled material or run-on only goes inwards toward a floor drain. The floor drain is kept capped at all times. Also, outside the building is a locked shut-off valve in case the drain cap fails. At the time of inspection, there were 120 drums of Dioxin waste and 136 drums of waste hydraulic fluid stored in the area.

Closure Findings

The CAC storage tank and incinerator had been completely dismantled and removed. The debris was manifested off-site May 11, 1991 and taken to a hazardous waste landfill. The pictures attached show the vacant concrete pads where the tank and incinerator were located.

No staining was present on the pads. No testing had been done on the pads because when CAC comes into contact with water, it forms chlorine gas and Hydrochloric acid. These would have been detected during the cleaning and dismantling process.

Apparently, the incinerator had never been operated after the initial trial burn.

The closure process appears to have been completed properly.

Unsatisfactory Features

None.

Should you have any questions regarding this report, please contact the St. Louis Regional Office.

Prepared by:

Gary Myers

Gary Myers
Environmental Specialist
St. Louis Regional Office

GM/sh

HAZARDOUS WASTE TREATMENT/STORAGE/DISPOSAL FACILITY

PERMITTED FACILITY CHECKLIST

Name of Facility: Monsanto-John F. Queeny Plant Date 12/19/91

Address: 1700 S. Second Street Missouri I.D. # 001002

St. Louis, Missouri 63177-7040 EPA I.D. # MOD004954111

Facility Representative: Cheistopher G Dorow Env. Eng Transporter? ___, # ___

Title: Rich Koenig Senior Tech Phone Number 622-1469 1473

Provide a brief description of the treatment, storage or disposal process, if the process has changed from the description in the permit application.

Facility has reduced in production Departments from 8 to 4 The CAC & LASSO production has stopped and department ~~has~~ is being dismantled

List the hazardous wastes, if any, that are not listed in the application or permit but that are found being treated, stored, disposed or recycled:

	Waste	Amount/Month	Kilogram/Month	I.D.#	Disposition
1.	SEE ATTACHED Revised Permit levels.				
2.					
3.					
4.					
	Total				

Are the manifest(s) and quarterly summary reports being completed and filed with the Department of Natural Resources at P.O.Box 176, Jefferson City, MO. 65102 as required.

yes ✓ no ___

The following numbering system incorporates the state and federal citations. The state citations to the regulations appears at the top of each section. The last part of the state citation refers to the part of 10 CFR, the federal regulation. In the column, the federal regulation appears as a period and number, .XX. The more stringent state regulations appear in parenthesis, ( ).

10 CSR 25-5.262 Standards for Generators

.11 Generator's MO and EPA I.D. Numbers .....(✓)

(2B) No more than 10 days time between generator and facility signatures.....(✓)

(2B2) Serially Increasing shipment number .....(✓)

Generator's name, address, phone #.....(✓)

All transporters' names, phone #'s, MO and EPA I.D. #'s.....(✓)

Designated facility name, address, phone # and EPA I.D. #.....(✓)

Proper DOT Shipping Name, Hazard Class and I.D. #.....(✓)

Containers, Quantity and Unit Wt/Vol being shipped properly designated.....(✓)

(2B6) Proper certification.....(✓)

(2B6) Manifests returned within 35 days.....(✓)

(2B6) Completed manifests submitted to DNR quarterly.....(✓)

.23 Manifest properly signed by generator/transporter/TSD and dated.....(✓)

(2D1) Summary Manifests Report submitted to DNR quarterly.....(✓)

(2D2) Exception generator report submitted within 45 days.....(✓)

.41 Biennial Report.....(✓)

.30 Waste stored in proper DOT containers.....( )

.32 Containers/Tanks labeled "Hazardous Waste" and labeled per proper DOT requirements during storage.....(✓)

.33 Placards available for use by transporters.....(✓)

(2C) Facility inspected and maintained.....(✓)

Ignitable and reactive wastes properly handled.....(✓)

Date of accumulation marked.....(✓)

Storage less than 90 days (if applicable).....(✓)

(2C2) Satellite Accumulation requirements met (if applicable).....(✓)

Stored in satellite areas less than 1 year.....(✓)

Container marked identifying contents and beginning date.....(✓)

Containers kept closed / compatible / good condition.....(✓)

Quantities accumulated not exceeding 55 gal. (1 quart acutely hz waste).(✓)

10 CSR 25-7.264(2)(B) General Facility Standard - General Conditions III. - IV.

.12(a) Notice of Hazardous Waste shipment from foreign source.....NA

(b) Notice of permit when receiving waste.....NA

.13 General Waste Analysis

(a)(1) Copy of plan on site.....(N)

(a)(3)(i) Plan updated if process(es) change.....(N)

(ii) Analysis repeated if manifest discrepancy.....(N)

(b) Procedures to identify wastes on site including leachate and runoff.....(N)

(c) Procedures to identify wastes from off site.....(N/A)

Waste Analysis plan up-to-date.....(N)

Identify hazardous wastes handled at the facility including leachate and runoff.....(N)

Means to confirm off-site wastes (manifest discrepancy) and run off.....(N/A)

.14(b) Security

24-hour surveillance system at facility or.....(Y)

An artificial or natural boundary / controlled access.....(Y)

Restricted access sign posted at each entrance.....(Y)

Legible from a distance of 50 feet.....(Y)

.15 General Inspection

(a) Facility inspected and maintained.....(Y)

(b)(1) Inspect emergency equipment, security devices, operating and structural equipment.....(Y)

(c) Remedied any deteriorated or malfunctioning equipment (check equipment).....(Y)

(d) Records of inspections retained.....(Y)

.16 Personnel training

(a) Completed classroom or on-the-job training to handle emergencies.....( )

(a)(2) Trainer qualified in hazardous waste management procedures documented..( )

(c) Annual review of training.....( )

(d) Job title, description, and name of person filling position.....( )

(e) Written record of the type and amount of training given.....( )

.17 General Requirements for Ignitable, Reactive or Incompatible Wastes

(a) Precautions taken to prevent accidental ignition.....( )

(b) Precautions taken to prevent reaction.....( )

(c) Documented methods used.....( )

.18 Location Standard

(b) Floodplains - plan in place for how facility will remove wastes from areas that could be flooded.....( )

10 CSR 25-7.264(2)(C) Preparedness and Prevention (General/Standard/Special) Condition IX.

.32(a) Internal communication or alarm system.....( )

(b) Device in the hazardous waste operation area capable of summoning emergency assistance.....( )

(c) Fire control, spill control, and decontamination equipment available.....( )

(d) Adequate water supply for fire control equipment.....( )

.33(a) Adequate and proper safety equipment, available and ready.....( )

.34 Each person in hazardous waste area able to summon help.....( )

.35 Adequate aisle space.....( )

.37 Arrangements with local emergency agencies.....( )

10 CSR 25-7.264(2)(D) Contingency Plan (General/Standard/Special) Condition X.

.51 Has contingency plan been used successfully.....Never used.....(N)

.52 Are following items up-to-date

(a) Detailed description of procedures that personnel must implement in response to fires, explosions, releases of hazardous waste.....(Y)

(c) Formal arrangements with emergency services.....(Y)

(d) Name, address,and phone numbers (home & office) of emergency coordinator(s)(Y)

(e) Emergency equipment including its description and location.....(Y)

(f) Evacuation plan.....(Y)

.53 Copy of the contingency plan at site.....(Y)

.54 Contingency plan need amendments made as necessary.....(Y)

.55 Emergency coordinator can commit resources in an emergency.....(Y)

.56 Emergency coordinator can explain his responsibilities in emergency situations (Use the exit interview to ask specific questions about possible emergencies at site.).....(Y)

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10 CSR 25-7.264(2)E) Manifest System (General/Standard/Special) Condition.....XI.

.71 Use of Manifest System

For off-site facilities

(a)(1) Manifests signed by generator/transporter/TSD and dated.....(N/A)

(a)(2) Discrepancy in manifested loads noted.....( )

(a)(3) Copy to transporter.....( )

(a)(4) Copy to generator in 30 days.....( )

(a)(5) Copy at facility for 3 years.....( )

(c) Use Generator Checklist for waste sent off-site 10 CSR 25-5.262.....( )

Operating Record

.72(a) Manifest properly signed and dated.....(Y)

(b) Completed manifests submitted to DNR quarterly.....(Y)

(c) Summary Manifest Report submitted to DNR quarterly.....(Y)

(d) Biennial Report.....(Y)

.73(a) Description, quantity, and TSD process for all hazardous wastes.....(Y)

(b)(1) Location and quantity of all hazardous waste.....(Y)

(b)(3) Waste analysis records from off-site sources.....(Y)

(b)(4) Summary and description of emergency incidents.....(Y)

(b)(5) Record of inspections.....(Y)

(b)(6) Monitoring and testing and analytical results on-site if necessary.....(Y)

Reporting

.74 Records are kept and available for inspection.....(Y)

.75 Quarterly facility reports submitted.....(Y)

(2G) Ground water monitoring data on-site/submitted.....(NA)

(2H) Certification of information signed.....(ND)

.76 Unmanifested waste reports for off-site facilities on-site/submitted.....(NA)

.77 Reports for emergencies, spills, closure on-site/submitted.....(Y)

10 CSR 25-7.264(2)(F) Ground Water Monitoring (General/Standard/Special) Condition XII.

N/A

.90 Monitoring Well Construction

Please describe the casing material and well diameters and locations if different than described in the permit application:_____

_____

_____

Describe the condition and type of protective casing in the monitoring wells if different than described in the permit application:_____

_____

_____

Describe the security measures completed to protect the wells from outside influences if different than described in the permit application:_____

_____

_____

The wells appear structurally sound and there is no failure in the integrity. yes____ no _____ unknown ____

The wells appear tightly sealed at the surface and no pathways exist for surface water to leak into the wells. yes____ no _____ unknown ____

.91(a) Have records been kept of analyses of ground and surface water sampling? yes____ no _____ unknown ____

(F1) Have these records been submitted to EPA/DNR? yes____ no _____ unknown ____

(F5) Can personnel identify surface water sampling points or direction of drainage( )

_____

_____

_____

_____

10 CSR 25-7.264(2)(G) Closure and Post-Closure (General/Standard/Special) Condition XIII.

.112 There is a copy of the approved closure and post-closure plans onsite.....(N)
Plan is up-to-date.....(N)

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10 CSR 25-7.264(2)(H) Financial Requirements (General/Standard/Special) Condition XIV.

March 1991

.140 Can 0/0 produce documents showing compliance with financial requirements for closure, post-closure, and sudden and non sudden liability.....(N)
.143(a) Closure cost estimates are up-to-date.....(N)
(b) Letter of transmittal to MDNR on-site.....(N)
.145(a) Post-closure cost estimates are up to date.....(N)
(b) Letter of transmittal to MDNR on-site.....(N)
.147 Liability requirements are up-to-date.....(N)

10 CSR 25-7.264(2)(I) Use and Management of Containers (General/Std/Special) Condition I.A.

.171 Containers in good condition.....(N)
.172 Containers made of materials compatible with hazardous wastes placed in them.(N)
.174 Hazardous waste containers storage area inspected once a week and inspection log completed.....(N)
.175 Containment free of cracks; containers elevated; run-on prevented; sump empty; no sign of stains of spilled material.....(N)

.176 Ignitable or reactive waste at least 50 ft. from property line.....(N)
.177(a) Incompatible wastes placed in different containers.....(N)
(c) Containers holding incompatible wastes separated by dikes, or walls.....(N)

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10 CSR 25-7.264(2)(J) Tanks (General/Standard/Special) Condition I.B.

(J)(1.) No hazardous waste having a vapor pressure of 78 mm of Hg at 25°C in an open tank .....( )

.194(a) No hazardous waste shall be placed in tank if it causes a failure.....( )

.194(b) o/o uses appropriate practices to prevent spills (one of the following)

(1) spill prevention devices.....( )

(2) overfill prevention devices.....( )

(3) maintain sufficient freeboard.....( )

.194 (c) if spill facility complied with 264.196.....( )

.195 (a) overfill controls inspected.....( )

.195 (b) the following components are inspected daily

(1) above ground portions of tanks.....( )

(2) data from leak detection equipment.....( )

(3) area around tank to check for leaks.....( )

.195(c) cathodic protection and integrity of tank(s) inspected

(1) within 6 months of installation and annually thereafter.....( )

(2) all sources of impressed current must be inspected every other month....( )

.195(d) inspections documented in operating record.....( )

Electrode connections are maintained and free of corrosion.....( )

Tanks and piping can be readily inspected including the bottom.....( )

The secondary containment is/is coated with, an impermeable layer and is free of cracks peeling, or blisters.....( )

Can 0/0 show the locations of buried anodes and demonstrate access to them.....( )

Can 0/0 demonstrate use of the instrument for monitoring the tank-to-soil potential...( )

Can 0/0 demonstrate the use of the active cathodic protection system (rectifier).....( )

Can 0/0 produce the operating record showing periodic inspections.....( )

Secondary containment is operable and free of fluids.....(✓)

Tank foundation (support over buried tank) is free of structural defects.....(✓)

Secondary containment is preventing run-off/run-on.....(✓)

There is no observed evidence of leaks or corrosion in piping or ancillary equipment..(✓)

There is no evidence or record of leaks in tank(s) or piping on ground or floor.....(✓)

Overfilling prevention device is operable/freeboard is maintained.....( )

O/o inspects tank(s) and piping daily.....( )

O/o inspects cathodic protection annually/monthly (impressed current).....( )

All inspections are reported in operating record.....(✓)

Minor spills are cleaned up immediately.....(✓)

10 CSR 25-7.264(2)(0) Incinerators (General/Standard/Special) Condition II.

Closed

.341(a) Waste analysis on feed stream.....(N/A)

(b) Physical and chemical composition of feed stream comply with permit.....( )

.343(b) Stack emissions meet HCl limits.....( )

(c) Stack emissions meet particulate limits.....( )

.344 Burning only permitted wastes.....( )

.345 Operating conditions: The permittee must operate the incinerator within the limits specified in the attached Chart A.....( )

.347(a) Incinerator operating parameters must be monitored and recorded as specified in the attached Chart B.....( )

.347(c) Monthly operational testing of waste feed cutoff system documented (Note which interlocks were triggered).....( )

Weekly testing of waste feed cutoff instrumentation documented.....( )

Waste feed cutoff demonstrated during inspection (note which interlock was tested).....( )

.347(d) Monitoring and inspection data recorded and maintained as required (note dates of records spot-checked for operating limits and parameters).....( )

Chart A: Operating Conditions

Operating Parameters	Lower Limit	Upper Limit	Corrective Action
Waste feed rate		1080 lb/hr instantaneous	Automatic waste....( ) feed shut-off
Combustion temperature	950°C		Automatic waste....( ) feed shut-off
Combustion air flow rate	1500 acfm	1800 acfm	Automatic waste....( ) feed shut-off
Steam	675 lb/hr		Automatic waste....( ) feed shut-off
Burner atomization pressure	80 psig		Automatic waste....( ) feed shut-off
Stack gas CO concentration		100 ppm	Automatic waste....( ) feed shut-off
Fresh water flow rate to scrubber	80 gpm	100 gpm	Automatic waste....( ) feed shut-off
Fresh water flow rate to quench	50 gpm		Automatic waste....( ) feed shut-off

Chart B: Operating Parameters

System/Purpose	Frequency of Monitoring	Frequency of Calibration	Continuous Monitoring System*
Waste feed rate	Continuously	Annually	Mass flowmeter.....( )
Combustion temperature	Continuously	Annually	Type K.....( ) thermocouple
Combustion air flow rate	Continuously	Semi-annually	Air flow meter.....( )
Steam flow rate	Automatically every 15 min.	Annually	Mass flowmeter.....( )
Burner atomization	Automatically every 15 min.	Annually	Pressure switch....( )
CO concentration	Continuously	Daily**	NDIR .....( )
Scrubber flow rate	Automatically every 15 min.	Annually	Mass flowmeter.....( )
Quench flow rate	Automatically every 15 min.	Annually	Mass flowmeter ....( )

*Continuous Monitoring System means the total equipment required for determination of a specified parameter (e.g. combustion temperature, CO concentration, etc.). Total equipment could include, but is not limited to, primary measuring device or sample interface, parameter analyzer, transmitter and data recording system.

**The calibration frequency for the CO monitor shall be immediately after detection of a drift of the zero of span beyond the manufacturer's recommendations during the daily check.

(✓) In compliance (—) In violation

Inspector's name Gary Myers

Title Env. Specialist

Date 12/19/91

FORM PERMIT-INSPEC (MARCH 1988)